

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the rejections of the application are respectfully requested in view of the amendments and remarks herewith, which place the application into condition for allowance. The present amendment is being made to facilitate prosecution of the application.

I. STATUS OF THE CLAIMS AND FORMAL MATTERS

Claims 1-19, 21-39, 41-59 and 61-65 are currently pending in this application. Independent claims 21, 38, 41, and 58-59 are hereby amended. Claims 1-19, 21-39, 41-59 and 61-65 were previously presented. New claims 66-68 have been added. No new matter has been introduced.

Changes to claims are not made for the purpose of patentability within the meaning of 35 U.S.C. §101, §102, §103, or §112. Rather, these changes are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

II. ALLOWABLE SUBJECT MATTER

In the Office Action, the Examiner indicated that previously presented independent claims 61-65 are allowed, for which Applicants thank the Examiner.

III. SUPPORT FOR NEW CLAIMS

Claims 66-68 have been added by incorporating some of the patentable features of

allowable claims 14, 42, and 43. Additionally, exemplary support for the added claims may be found in, for example, paragraphs [0127], [0134], [0262], and [0263] of Applicants' published application, whereby:

[0127] Specifically, a system selecting signal for selecting an improvement system for improving the image quality of the broadcast image data is also supplied to the improvement information generating unit 11. The improvement information generating unit 11 generates one or more types of improvement information in accordance with the system selecting signal supplied thereto. The improvement information generated by the improvement information generating unit 11 is supplied to an integrating unit 12.

[0134] First, at step S1, the improvement information generating unit 11 generates one or more types of improvement information for improving the image quality of broadcast image data in accordance with a system selecting signal supplied thereto, and supplies the improvement information to the integrating unit 12. The unit of broadcast image data for which improvement information is generated (hereinafter suitably referred to as improvement information generation unit) may be, for example, one frame, one program or the like.

[0262] As described above, a plurality of types of improvement information are transmitted from the transmitting device 1, and in the receiving device 3, improvement information corresponding to the image quality meeting the request from the user is selected from the plurality of improvement information and the image quality is improved by using the selected improvement information. Therefore, an image of the image quality meeting the request of the user can be provided and more detailed accounting can be carried out in accordance with the image quality of the image provided for the user.

[0263] In the above-described case, a plurality of types of improvement information area transmitted from the transmitting device 1, and in the receiving device 3, improvement information corresponding to the image quality meeting the request from the user is selected from the plurality of improvement information. However, it is also possible that the transmitting device 1 accepts the request by the user from the receiving device 3 in advance and transmits only the improvement information corresponding to the image quality meeting the request, to the receiving device 3. In this case, only the improvement information corresponding to the image quality meeting the request from the user is included in an integrated signal by the integrating unit 12 under the control of the accounting unit 14, as indicated by a dotted line in FIG. 2.

Thus, Applicants submit that claims 66-68 are directed to patentable subject matter.

Favorable consideration and allowance of these claims are, therefore, respectfully requested.

IV. REJECTIONS UNDER 35 U.S.C. §102 AND 35 U.S.C. §103

Claims 1-13, 16-19, 21-33, 36-39, 41-42, 45-52, and 55-59 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,323,905 to Kondo et al. (hereinafter, merely "*Kondo*"). Also, claims 1, 15-19, 41-42, and 54-59 were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,243,423 to DeJean et al. (hereinafter, merely "*DeJean*").

Claims 21 and 35-39 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 5,243,423 to DeJean et al. (hereinafter, merely "*DeJean*").

V. RESPONSE TO REJECTIONS

Independent claim 1 recites, *inter alia*:

"A data processing device comprising:

an improvement information generating unit adapted to generate improvement information for improving quality of data; and
an embedding unit adapted to embed **a plurality of types of improvement information** into the data, wherein the improvement information generating unit generates the plurality of types of improvement information **for converting the data into a plurality of qualities** and,

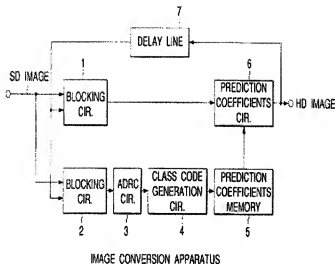
wherein the embedding unit embeds the plurality of types of improvement information into the data so that the data and the improvement information can be restored." (Emphasis added)

Accordingly, the recited improvement information generation generating unit “generates the plurality of types of improvement information **for converting the data into a plurality of qualities.**” For instance, the first improvement information can convert the data into a first level quality. The second improvement information can convert the data into a second level quality which is different from the first level quality.

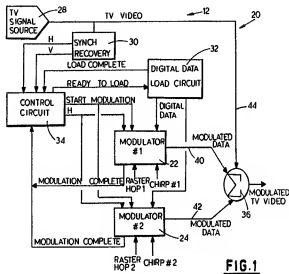
The cited *Kondo* and *DeJean* references do not disclose or suggest “an improvement information generating unit adapted to generate a plurality of types of improvement information [,]” whereby “**the improvement information generating unit generates the plurality of types of improvement information for converting the data into a plurality of qualities [,]**” as recited in claim 1.

Kondo merely discloses the conversion of image data into image data of a higher quality using prediction coefficients. See FIG. 1 of *Kondo* below.

FIG.1



DeJean relates to co-channel communication system (see FIG. 1 Below) for transmitting data, such as digital data, in an active or visible portion of the video raster is generally identified with the reference numeral (20). Data is transmitted in a manner that is relatively imperceptible to the viewer. The co-channel communication system includes one or more modulators for modulating the data along active video lines of a video raster. In order to insure that the data is relatively imperceptible to a viewer, the active video lines upon which the data is modulated are varied according to a pseudo random sequence. *DeJean*, column 2, lines 46-59.



Kondo merely discloses a plurality of prediction coefficients. The plurality prediction coefficients described by *Kondo* merely converts the data into a specific quality. That is to say, the plurality of prediction coefficients can convert the data into a first level quality, but the plurality of prediction coefficients cannot convert the data into a second level quality. Hence *Kondo* fails to disclose or render predictable “generat[ing] [a] plurality of types of improvement information **for converting the data into a plurality of qualities [,]**” as recited in claim 1.

Likewise, *DeJean*’s active video lines being varied according to a pseudo random sequence for the purpose of insuring that the data is relatively imperceptible to a viewer also fails to disclose or render predictable “generat[ing] [a] plurality of types of improvement information **for converting the data into a plurality of qualities [,]**” as according to claim 1.

Therefore, Applicants respectfully submit that claim 1 is patentable. For reasons similar to those described above with regard to independent claim 1, independent claims 18, 19, 21, 38, 39, 41, and 58-59 are also patentable.

VI. DEPENDENT CLAIMS

The other claims are dependent from one of the independent claims discussed above, and are therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

Similarly, because Applicants maintain that all claims are allowable for at least the reasons presented hereinabove, in the interests of brevity, this response does not comment on each and every comment made by the Examiner in the Office Action. This should not be taken as acquiescence of the substance of those comments, and Applicants reserve the right to address such comments.

CONCLUSION

In view of the foregoing amendments and remarks, it is believed that all of the claims remaining in this application are patentable and Applicants respectfully request early passage to issue of the present application.

In the event the Examiner disagrees with any of the statements appearing above with respect to the disclosures in the cited reference or references, it is respectfully requested that

the Examiner specifically indicate those portion or portions of the reference or references, providing the basis for a contrary view.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account No. 50-0320.

Respectfully submitted,

FROMMER LAWRENCE & HAUG LLP
Attorneys for Applicants

By 

Thomas F. Presson
Reg. No. 41,442
Brian M. McGuire
Reg. No. 55,445
Ph: (212) 588-0800
Fax: (212) 588-0500